DRAWING AMENDMENTS (Other than Those Requested on Form PTO-948)

Drawing amendments are provided on separate sheets accompanying this Response (which are each labeled "Replacement Sheet" in the top margin).

REMARKS

1. The Amendments and the Support Therefor

Ten claims (4, 9-15, 17, 20) have been canceled, nine new claims (25-33) have been added, and claims 1, 3, 5-8, 16, 18, and 21-22 have been amended to leave claims 1-3, 5, 6-8, 16, 18-19, and 21-33 in the application. No new matter has been added by the amendments or new claims, wherein:

- ***Independent Claim 1*** is amended to eliminate "tension" language (which seemed to generate confusion), and to recite the arrangement of FIG. 1, wherein the retaining means (loop straps 1 and hooks 20) bend the cells 2 in a plane parallel to the pad 12.
- ***Claim 3*** is amended to incorporate claim 4.
- ***Claim 5*** is amended to account for claim 4's cancellation and incorporation into claim 3.
- ***Claim 6*** finds support in (for example) FIG. 3, wherein the retaining means (loop straps 1 and hooks 20) are offset at different distances from the depicted center linear axis of the cell, such that the length of the cell is bent.
- ***Claim 7*** is amended to conform it to amended claim 6.
- ***Claim 8*** is amended to adjust its dependency to its parent claim 6, rather than to intervening claim 7.
- ***Independent claim 16*** finds support in (for example) claims 21-22 and 24, and also in (for example) FIG. 1, wherein curved cells are shown situated within the curves of adjacent cells.
- ***Claim 18*** is amended to account for the cancellation of claim 17.
- ***Claim 21*** is amended to adjust its dependency to its parent claim 1, rather than to intervening claim 3.
- ***Claim 22*** is amended to account for claim 4's cancellation and incorporation into claim 3.
- ***Claim 25*** finds support in (for example) FIGS. 1-2, which show the cells 2 bent to rest in a plane coplanar with the pad base 12.

- ***Claim 26*** finds support in (for example) FIGS. 1-2, which show the cells 2 bent to rest in a plane coplanar with the pad base 12.
- ***Independent claim 27*** finds support in (for example) claims 21-22 and 24, and also in (for example) FIG. 1, wherein curved cells are shown situated within the curves of adjacent cells.
- ***Claim 28*** finds support in (for example) page 3 line 25-page 4 line 6 and FIGS. 2-3.
- ***Claim 29*** finds support in (for example) FIGS. 1-2, which show the curved cells 2 resting coplanarly on the top of a bed.
- ***Claim 30*** finds support in (for example) FIG. 1, which shows the pad base 12 situated in a plane below the cells 2.
- ***Claim 31*** finds support in claim 12.
- ***Claim 32*** finds support in claim 13.
- ***Claim 33*** finds support in claim 14.

Further comments regarding the new claims are set out below at Section 9.

2. Sections 2-3 of the Office Action: Objections to the Drawings

The objections to the drawings set forth in *Section 2* of the Office Action are addressed by the accompanying replacement FIG. 1. Note that FIG. 1 simply shows how the bending and tension of the cells may be varied along the length of the bed. As noted in prior Responses (and in the application), the curved/tensioned cells are intended to prevent the "conveyor effect" that ordinary (e.g., straight) inflatable cells generate when they inflate and deflate, wherein the cells move the patient along the length of the bed as they inflate and deflate (see page 1 lines 18-27). This effect can be more pronounced where a section of the bed is inclined, since gravity can assist in moving the patient downwardly along the length of the bed (see page 4 lines 19-22). Thus, the bed is depicted in FIG. 1 with the cells being more highly tensioned into more curved shapes near the head of the bed, which is more likely to be inclined upwardly. The lines shown in the prior FIG. 1 (and now removed) were not gaps, but were intended to show greater tensioning/curvature. (Note that reference numerals shown in the remaining drawings, but not in FIG. 1, have also been added to FIG. 1 to enhance the reader's understanding.)

In any event, no provisions of the MPEP, 37 CFR, or 35 USC require that all features of the matters depicted in the drawings must be explained. Since the drawings comply with all requirements of 37 CFR §§1.81-1.84, there is no basis for rejection of the drawings.

As for the drawing objections in *Section 3* of the Office Action, these objections should be withdrawn because the drawings do in fact show all of the claimed features: FIG. 1 can be regarded as showing the cells in a deflated state, FIG. 2 can be regarded as showing the cells in an inflated state, and FIG. 3 shows the cells in both a tensioned state (in solid lines) and an untensioned state (in phantom lines). Further, it is noted that the claims reciting "deflated" cells have been canceled, and thus there is no need to depict this matter in the drawings.

3. Section 4 of the Office Action: Objection to the Specification

The objection to amended FIG. 3 should be withdrawn because the drawing clearly depicts a cell in a tensioned state (in solid lines), with hook 20 anchored to the pad base, and in an untensioned state (in phantom lines), with hook 20 released from the pad base, and showing the central axis of the cell in both states. There is nothing "new" whatsoever shown in this drawing. See, e.g., page 2 line 26-page 3 line 6:

> Preferably, the retaining means are releasable. In a preferred embodiment the retaining means secure the opposite ends of each cell at a predetermined distance from the centre linear axis of the cell. More preferably, the retaining means secure the central region of the cells along the centre linear axis of the cell. In the preferred embodiment, the retaining means comprise loop straps fixed to the pad base retaining the central region of each cell and hook type fasteners retaining each opposite end of the cell.
>
> By moving the fixing points of the opposite ends of each cell away from the same centre line as the centre region of the cell held in the loop straps, the loop straps are tensioned.

Also page 4 lines 1-6:

> By fixing of the ends 3 of the cells 2 at a distance 4 away from the cell axis, each end 3 of the cell 2 is pulled away from the centre axis of the cell, the loop straps 1 holding the central section of the cell become tensioned, preventing the central cell section from moving or rotating.

In accordance with the foregoing passages, FIG. 3 plainly shows a cell and its fastener 20 in a tensioned/attached state (in solid lines) and in an untensioned/unattached state (in phantom lines).

If the objection is maintained, kindly specify precisely which matter is regarded as "new."

4. Section 5 of the Office Action: Rejection of Claims 10-15 under 35 USC §112(1)

Claims 10-15 have been cancelled, thereby obviating these rejections.

5. Section 6 of the Office Action: Rejection of Claims 21-24 under 35 USC §112(1)

These rejections should be withdrawn since the specification and drawings clearly provide support for the claimed matter. See, for example, page 3 lines 25-32:

> FIG. 1 shows a plan view of a pad 10 comprising a bank of interleaving linear cells 2 extending transversely of the pad 10. As shown in FIGS. 1 and 2, loop straps 1 hold the central section of the cells 2 linearly in parallel with the cell axis 11 whereas the opposite ends 3 of the cells 2 are secured a pre-determined distance 4 off-set from the cell axis 11. The distance 4 can vary along the length of the pad.

This clearly describes bending of the cells between the straps 11 and the cell ends 3, and given that FIG. 1 is noted in the foregoing passage as being a plan view, it is also clear that the depicted cells are bent in the plane parallel to the pad, with the midsections of the cells being restrained to the pad and the ends 3 of the cells being pulled toward the foot of the bed. FIG. 2 shows this in greater detail, though the pad base is not shown. It cannot reasonably be said that an ordinary artisan would not know how to make and use the invention claimed and described.

6. Section 7 of the Office Action: Rejection of Claims 9-24 under 35 USC §112(2)

Claims 9-15 have been cancelled, thereby obviating these rejections.

The rejections to claims 16-20 should be withdrawn, as these rejections appear to be in error. The Office Action provides no explanation or basis for these rejections, and since the scope and meaning of the claims is apparent, it is not understood why these claims were rejected.

The rejections to claims 21-22 should also be withdrawn, since there is nothing unclear or ambiguous about these claims. As noted by the Court of Appeals for the Federal Circuit in *Miles Laboratories Inc. v. Shandon Inc.*, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993):

> The "distinctly claiming" requirement [of 35 USC §112(2)] means that the claims must have a clear and definite meaning when construed in the light of the complete patent document. ... Section 112 thus ensures definiteness of claim language. ... The test for definiteness is

> whether one skilled in the art would understand the bounds of the claim when read in light of the specification. ... If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, Section 112 demands no more.

(Citations omitted.) See also *Howmedica Osteonics Corp. v. Tranquil Prospects Ltd.*, 74 USPQ2d 1680, 1683 (Fed. Cir. 2005) ("[t]he definiteness of a patent claim depends on whether one skilled in the art would understand the bounds of the claim when read in light of the specification"); MPEP 2173.02 ("Definiteness of claim language must be analyzed, not in a vacuum, but in light of . . . . [t]he content of the particular application disclosure . . . ."). Here, one of ordinary skill would plainly understand these claims; as discussed in the foregoing Section 5 of this Response, the specification contains ample discussion of how the cells are bent.

7. Section 9 of the Office Action: Rejection of Claims 1-8 under 35 USC §102 in view of U.S. Patent 6,349,439 to *Cook*

U.S. Patent 6,349,439 to *Cook* illustrates a pressure pad (as in FIG. 1) having sets of alternately inflatable cells 1 and 2 wherein each cell is retained atop a base sheet 3 (seen in FIG. 3) by loops 4 (FIG. 1); see column 2 lines 53-55. Several loops 20 at one end of the pad are elastic, whereby these loops exert radial force on their cells to accelerate deflation (column 2 lines 56-67). FIG. 2 illustrates an alternative embodiment wherein cells are encased in sleeves 10 which are in turn held by elastic loops 20 to attain the same effect (column 3 lines 6-17).

FIGS. 4 and 5A-5C of *Cook* then illustrate an arrangement for retraining the base sheet 3 (and thus the cells 1 and 2 above) to a bed, wherein securing straps (21 in FIG. 4, 21a in FIGS. 5A/5B, and 21c in FIG. 5C) extend from the edges of the base sheet 3 to a portion of the bed (shown unlabeled in FIGS. 5A-5C); see column 3 lines 41-57. The straps 21 include loops 21a (FIGS. 5A/5B) or folds 21c (FIG. 5C) which expand to avoid tension on the straps 21 (and thus on the base sheet 3). When a patient lies on the cells of FIG. 5A, the edges of the pad may bend upwardly as seen in FIG. 5B as the center of the pad is pushed downwardly. In this case, the loops/folds 21a and 21c can open/unfold (as in FIGS. 5B-5C) to accommodate the bending of the pad without tearing the straps 20 off of the bed (see column 3 lines 53-57).

Claim 1 recites that the retaining means urge the lengths of the cells into a bent shape across

the pad, with the bend being within a plane parallel to the pad. In *Cook*, the retaining means – which the Office Action asserts are straps 4 and 20 – do not urge the lengths of the cells into a bent shape. Furthermore, even if they did urge the cells into the shape shown in FIG. 5B (which they don't, since *Cook* notes that the patient's weight causes the cells to effect this shape), these cells are bent *perpendicular* to the plane of the pad (i.e., they curve upwardly away from the pad)..

Regarding claim 3, the *Cook* straps 4 and 20 do not secure the opposite ends of each cell at a distance from the center linear axis of the cell, and secure the central region about the center linear axis, such that the lengths of the cells are bent. It is clear from the *Cook* drawings that the *Cook* straps 4 and 20 retain the lengths of the cells in a straight/linear form.

Similarly, regarding claim 6, the *Cook* straps 4 and 20 are not offset at different distances with respect to the center linear axis of the cell, such that the length of each cell is bent. It is clear from the *Cook* drawings that the *Cook* straps 4 and 20 rest at the same distances from the center linear axes of their cells.

Regarding claims 5 and 8, column 3 lines 41-48 of *Cook* are cited as allegedly disclosing the recited fasteners. However, column 3 lines 41-48 of *Cook* discusses straps which hold the pad base 3 atop the bed, whereas the recited fasteners releasably retain each end of the cell to the pad base. *Cook* therefore does not disclose the recited arrangement.

8. Section 8 of the Office Action: Rejection of Claims 1-9 and 16-20 under 35 USC §103 in view of U.S. Patent 5,966,762 to *Wu* and U.S. Patent 6,349,439 to *Cook*

Before reviewing the rejections, a brief overview of *Wu* is useful. Referring to FIG. 1, the Wu reference shows a mattress having a number of inflatable cells 1 within an envelope 2 (column 2 lines 7-19), with the inflatable cells 1 being held on/in the envelope 2 via buttons and sockets 11 (FIGS. 6-7) which engage the opposing ends of the cells 1 to the envelope 2, and fastening belts / straps 12 (FIGS. 1, 6-7) which extend from the base 20 of the envelope 2 about the circumferences of the cells 1 (column 2 lines 19-27). Inflatable "body turning means" 5 (inflatable cells 50, 50a, 50b, FIGS. 1 and 6-8) -- in essence, inflatable cells extending across the length of the underside of the mattress, and situated at the opposing transverse sides of the underside of the mattress -- can be

inflated as shown in FIGS. 7-8 to turn a patient from side to side (column 2 line 64-column 5 line 25). Similar "leg bending means" 4 (inflatable cells 40, 40a, 40b, FIGS. 1 and 3-5) and "head lifting means" 6 (inflatable cells 60, 61, 62, FIGS. 9-10) -- inflatable cells extending across the width of the underside of the mattress, and arrayed across portions of the length of the underside of the mattress -- can be inflated to lift the patient's legs and/or head (column 2 lines 33-60, column 3 lines 26-38).

The matter of ***claim 1*** is unobvious in view of *Wu* and *Cook*, at least because neither reference would lead an ordinary artisan to contemplate cells bent within a plane parallel to the pad. *Cook*'s FIG. 5B shows a cell bent perpendicular to the plane of the pad (i.e., upwardly), and FIGS. 7-8 of *Wu* show a similar arrangement. It cannot fairly be said that there is anything in either reference that would lead an ordinary artisan to consider the matter of claim 1, and thus of its dependent claims 2-8 and 21-22.

The matter of ***claim 16*** is unobvious in view of *Wu* and *Cook*, at least because neither reference would lead an ordinary artisan to contemplate curved cells having adjacent cells situated within their curves. As clearly seen in *Cook*'s FIG. 5B and *Wu*'s FIGS. 7-8, even where *Cook* and *Wu*'s cells are curved, no adjacent cells rest within the curves. It cannot fairly be said that there is anything in either reference that would lead an ordinary artisan to consider the matter of claim 16, and thus of its dependent claims 18-19 and 26.

9. New Claims 25-33

New ***claim 25***, which depends from independent claim 23, is submitted to be allowable for at least the same reasons as claim 23. Additionally, claim 25 is submitted to be independently allowable because none of *Cook*, *Wu*, or the other references of record show or suggest cells bent to rest in a common plane. As noted in preceding Sections of this Response, FIGS. 7-8 of *Wu* show cells bent upwardly such that each bent cell rests in an independent plane (with the planes of the cells being parallel to each other), and *Cook*'s FIG. 5B shows a similar arrangement.

New ***claim 26***, which depends from independent claim 16, is submitted to be allowable for at least the same reasons as claim 16. Further, claim 26 is also submitted to be independently allowable for the same reasons as claim 25 (discussed above).

New ***independent claim 27*** is submitted to be allowable because none of *Cook*, *Wu*, or the other references of record show or suggest curved cells wherein cells rest within the curves of adjacent cells.

New ***claim 28***, which depends from independent claim 27, is submitted to be allowable for at least the same reasons as claim 27. Further, claim 28 is also submitted to be independently allowable because the references of record do not show or suggest the recited arrangement.

New ***claim 29***, which depends from independent claim 27, is submitted to be allowable for at least the same reasons as claim 27. Further, claim 29 is also submitted to be independently allowable for the same reasons as claim 25 (discussed above).

New ***claims 30-33***, which ultimately depend from independent claim 27, are submitted to be allowable for at least the same reasons as claim 27. Further, these claims are also submitted to be independently allowable because the references of record do not show or suggest the recited arrangement.

10. In Closing

If any questions regarding the application arise, please contact the undersigned attorney. Telephone calls related to this application are welcomed and encouraged. The Commissioner is authorized to charge any fees or credit any overpayments relating to this application to deposit account number 18-2055.

ATTACHMENTS / ENCLOSURES:

- Replacement Sheet – FIG. 1

For the Applicant,

Craig A. Fieschko, Reg. No. 39,668
CUSTOMER NO. 25005
DEWITT ROSS & STEVENS S.C.
2 E. Mifflin St., Suite 600
Madison, WI 53703-2865
Telephone: (608) 395-6722
Facsimile: (608) 252-9243
cf@dewittross.com